

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A computer system for processing a query comprising:

a data store comprising a table of ~~objects~~ documents and ~~pre-computed values~~, the ~~pre-computed values comprising information to discern objects based on type pursuant to a hierarchical search~~, each ~~object~~ document having an associated document type in a hierarchy of document types, each document type having a type path that is a path from a root document type to the document type in the hierarchy of document types, the table comprising each document and its associated type path ~~an identifier and being extensible using an inheritance extension~~; and

a document retrieval system that accesses the table in the data store to determine, for each document, if its associated type path will satisfy the query, and generates query results comprising each type path that satisfies the query

~~a hardware / software interface system for manipulating the plurality of objects and pre-computed values.~~

2. (Currently Amended) The computer system of claim 1, wherein each document type is a user-defined type (UDT).

3. (Currently Amended) The computer system of claim 1, wherein a document type can be a subtype of another document type.

4. (Canceled)

5. (Original) The computer system of claim 4, wherein the data store comprises a computed column for storing each type path.

6. (Original) The computer system of claim 4, wherein each type path comprises a variable-length encoded value.

7. (Currently Amended) The computer system of claim 6, wherein each variable-length encoded value corresponds to a hierarchy level of the document type of the associated ~~object~~ document.

8. (Canceled)

9. (Currently Amended) The hardware / software interface system of claim 25 [[8]], wherein each document type is a user-defined type (UDT).

10. (Currently Amended) The hardware / software interface system of claim 25 [[8]], wherein a document type can be a subtype of another type.

11. (Currently Amended) The hardware / software interface system of claim 25 [[8]], wherein each document ~~object~~ has an associated type path.

12. (Currently Amended) The hardware / software interface system of claim 11, wherein each type path belongs to a computed column in the table ~~a data store~~.

13. (Original) The hardware / software interface system of claim 11, wherein each type path comprises a variable-length encoded value.

14. (Currently Amended) The hardware / software interface system of claim 13, wherein each variable-length encoded value corresponds to a hierarchy level of the document type of the associated document ~~object~~.

15 – 24. (Canceled)

25. (New) A computer system for processing a query comprising:

a data store comprising a table of documents and pre-computed values, the pre-computed values comprising information to discern objects based on type pursuant to a hierarchical search, each document having an associated document type in a hierarchy of document types; and

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a document retrieval system that accesses the table in the data store to determine, for each document, if its associated pre-computed value will satisfy the query, and generates query results comprising each pre-computed value that satisfies the query.